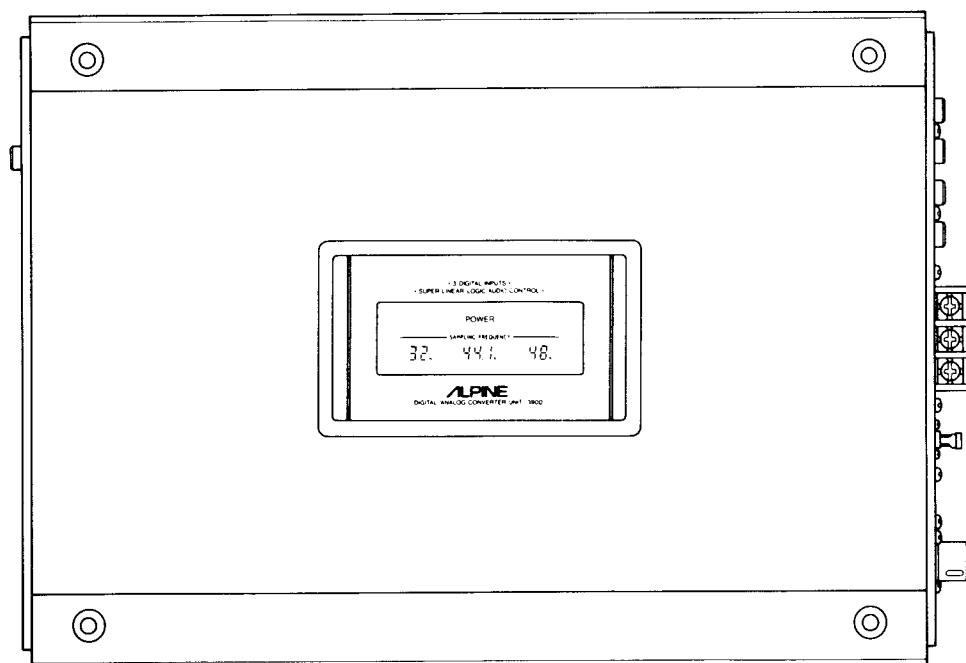


ALPINE SERVICE MANUAL

Fluency D/A Converter Unit



サービス費用区分	A
技術資料 No.	MP-01-0

3900

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Spare Schematic Diagram Inserted.

Specifications

<D / A Converter>

Output Level	0.75 ± 0.15V
Output Impedance	80 ± 20ohm
Channel Balance	0 ± 3dB
T.H.D.	997Hz : 0.06%
Frequency Response (at 1kHz)	17Hz : 0 + 1, -3dB
	127Hz : 0 ± 1dB
	10.007kHz : 0 ± 1dB
	19.997kHz : 0 + 1, -5dB
S / N Ratio	90dB
Separation	997Hz : 85dB
	10.007kHz : 75dB

<Audio Control>

Output Impedance	80 ± 20ohm
Channel Balance	0 ± 3dB
T.H.D.	997Hz : 0.009%
Frequency Response (at 1kHz)	17Hz : 0 ± 1dB
	127Hz : 0 ± 1dB
	10.007kHz : 0 ± 1dB
	19.997kHz : 0 ± 2dB
S / N Ratio	90dB
Separation	997Hz : 85dB
	10.007kHz : 75dB

<General>

Power Supply	14V DC (10.5~16V)
Load Impedance	10kohm
Semiconductors	38 IC's, 35 Transistors, 31 Diodes, 5 Zener Diodes
Dimension (W×H×D)	326×57.5×220mm
Weight	3.2kg

Note : Due to continuing product improvement, specifications and designs are subject to change without notice.

FEATURES

- **FLUENCY D/A CONVERTER**

Conventional D-to-A conversion methods rely on some form of filtering to smooth out stepped non-continuous digital information. The result, although very similar to the original signal, is not identical. The 3900 uses the "Fluency Theory" in a very radical and extremely accurate implementation to recreate the original signal using a continuous, non-interrupted representation of the waveform which are much more similar to musical passages than digitally produced steps. The result is a uniform waveform, virtually identical to the original signal.

- **3 SEPARATE OPTICAL DIGITAL INPUTS**

The use of optically transmitted digital information ensures that the digital audio information reaches the 3900 with no distortion or interference that may occur otherwise due to vehicle-induced, external noise sources. Three separate optical digital inputs are provided to facilitate numerous system combinations.

- **AUTOMATIC SAMPLING FREQUENCY SELECTOR**

The 3900 digital inputs accept signals and automatically switch to either one of the three digital audio standard sampling frequencies (32 kHz, 44.1 kHz, and 48 kHz).

- **HIGH PERFORMANCE AUDIO CONTROL CIRCUITRY**

The 3900 houses a very high quality Volume, Bass, Treble, Balance and Fader control circuitry. This is controlled by any Alpine head unit featuring External Processor Controlling Capability (such as the 7618). If a head unit without this capability is used, the 3900 Audio Control circuitry can be conveniently bypassed to allow a fixed level signal be fed back to the head unit's shuttle inputs. Volume, Bass, Treble, Balance and Fader controls are then provided by the head unit.

- **FRONT, REAR AND NON-FADING PRE-AMP OUTPUTS**

Three pairs of outputs provide front, rear, or non-fading outputs. The non-fading output can be used to drive an Alpine amplifier with built-in Active Dividing Network as a subwoofer amplifier that operates independent of the fader control.

- **FIXED-LEVEL LINE OUTPUT**

To be used when a head unit without External Processor Controlling Capability is used.

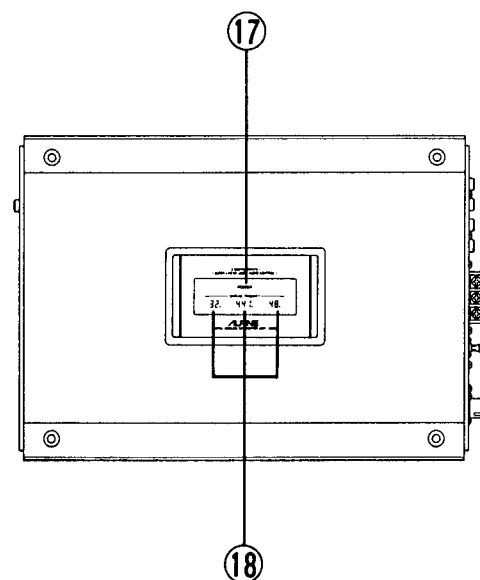
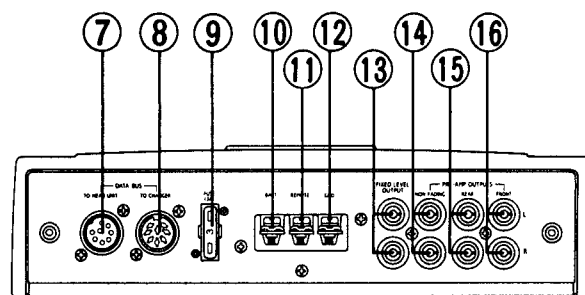
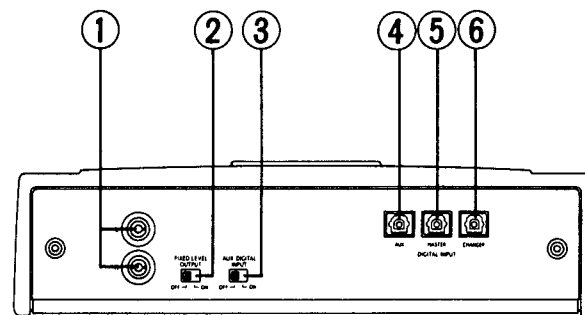
- **REMOTE POWER ON/OFF**

The 3900 turns on and off along with the head unit.

- **DC-TO-DC SWITCHING MODE POWER SUPPLY**

Completely isolates the 3900's audio circuitry from the vehicle's battery. The set-up offers the best possible immunity from vehicle-induced noises and variations in the battery voltage.

SWITCHES AND TERMINALS



- ① Analog Input RCA Connectors
- ② Fixed-Level Line Output Selector Switch
- ③ Auxiliary Digital Input Enable Switch
- ④ Auxiliary Digital Input Connector
- ⑤ Master Digital Input Connector
- ⑥ CD Shuttle Digital Input Connector
- ⑦ Data Bus Output Connector
- ⑧ Data Bus Input Connector
- ⑨ Fuse (3A)

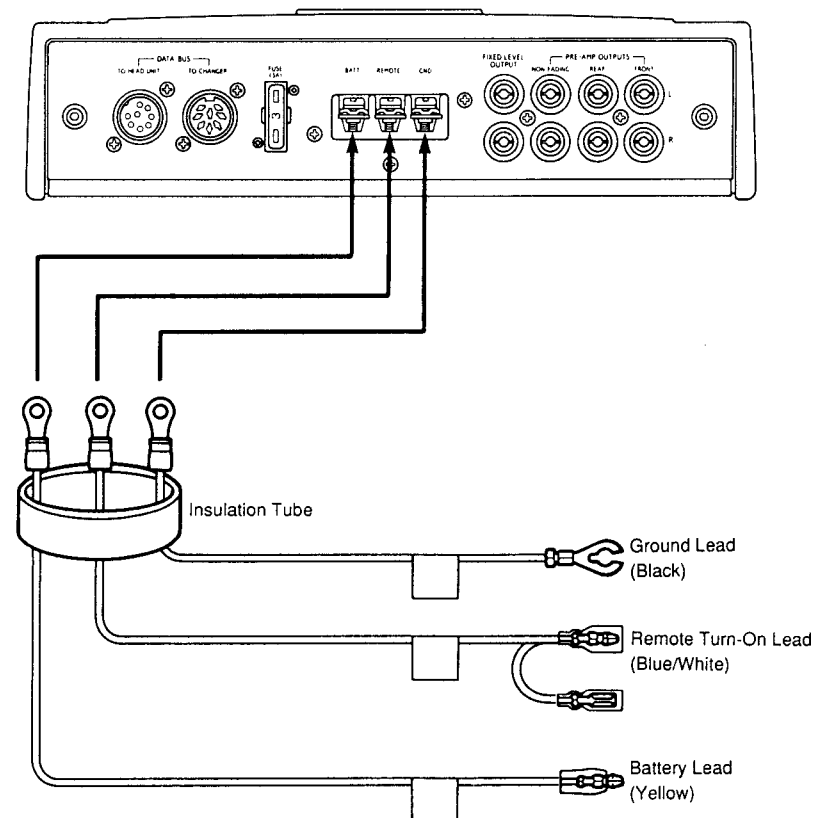
SWITCHES AND TERMINALS

- ⑩ Battery Lead Terminal
- ⑪ Remote Turn-On Lead Terminal
- ⑫ Ground Lead Terminal
- ⑬ Fixed-Level Line Output RCA Connectors
- ⑭ Non-Fading RCA Output Connectors
- ⑮ Rear-Fading RCA Output Connectors

- ⑯ Front-Fading RCA Output Connectors
- ⑰ Power-On Indicator
- ⑱ SAMPLING FREQUENCY Indicators

The player automatically detects, switches to, and displays the sampling frequency used by the digital source.

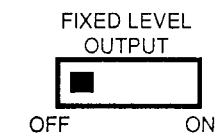
CONNECTIONS



CONNECTIONS

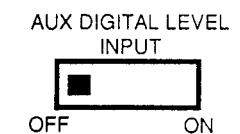
Fixed Level Output ON/OFF Switch

When using an Alpine head unit that features External Processor Controlling Capability (such as the 7618), this switch must be left in OFF position. If the CD shuttle controller used does not possess the External Processor Controlling Capability, then this switch must be left ON, the 3900's FIXED LEVEL LINE OUTPUT should be connected to the head unit's SHUTTLE INPUT, and the 3900's Front, Rear, and Non-fading pre-amp outputs should not be used.



AUX Digital Input ON/OFF Switch

Place the switch in the ON position when using an auxiliary source unit which has a digital output.



Battery Lead

Connect this lead directly to the car's battery. Always use an additional in-line 5A Fuse-holder as close as possible to the battery's positive terminal.

Remote Turn-On Lead

When using the 3900 in combination with a product which has pin terminals, connect the lead to the remote on lead terminal.

Ground Lead

Connect this lead to a metal part of the chassis using a already existing screw. Poor connection may cause operation or noise problems.

故障かな…?と思う前に

操作ミスや勘違いで故障と間違えることがあります。修理を依頼する前にもう一度チェックしてみましょう。案外、ちょっとしたお手入れで直ることが多いものです。

症 状	原 因	処 置
動作しない。 (●パワー・インジケータが点灯しない。) (●ヒューズが切れるなどの症状。)	ヘッド・ユニットの電源が入っていない。	ヘッド・ユニットの電源を入れる。
	アース・リード線の接続が不完全。	アース・リード線の接続を確認する。
	バッテリー電源リード線の接続が不完全。	バッテリー電源リード線の接続を確認する。
	ヒューズが切れている。	所定容量のヒューズと交換する。
	リモート・オン・リード線の接続が不完全。	リモート・オン・リード線の接続を確認する。
電源は入るが、音が出ない。	切りかえスイッチ位置がシステムに合っていない。	システムに合わせて正しい位置にする。
	光ファイバー・ケーブルの接続が不完全。	ジャックに正しく挿入する。
	PINコードの接続が不完全。	PIN端子に正しく挿入する。

特長

●FE(フルエンシー)DAC

FE-DACとはデジタル符号を新補間関数によって、ダイレクトに曲線をつないでアナログ再生する理論です。これによって極めて自然な波形が実現します。

●3モード・デジタル入力端子

光学式(オプティカル)デジタル入力を3系統用意しています。デジタル結合システムの拡張が可能です。

●サンプリング周波数3モード対応

32kHz、44.1kHz、48kHzのサンプリング周波数を自動切りかえし、あらゆるモードに対応します。

●高性能オーディオ・コントロール機能

17ビットD/Aコンバーターを使用した電流加算型のボリューム・コントロールを搭載しました。

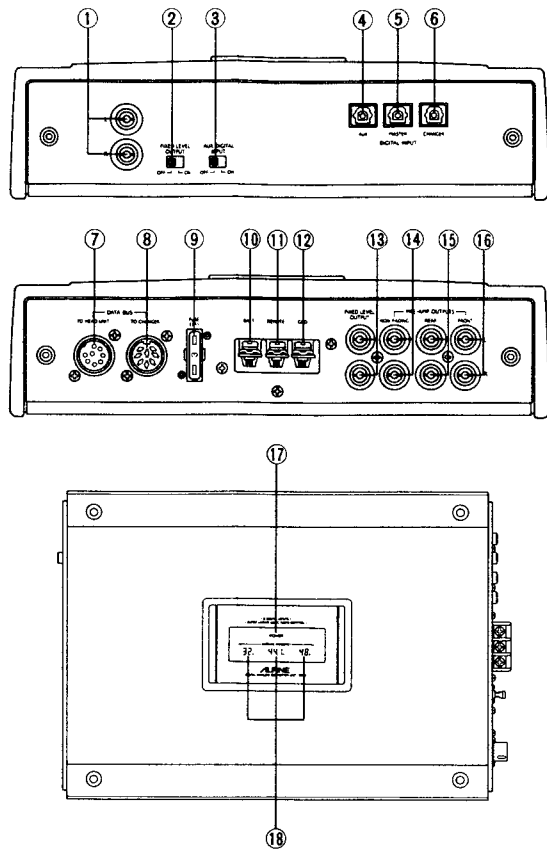
●ノンフェーディング(NON FADING)出力

フェーダーに関わらない出力を持つことで、サブウーハーなどの発展性を用意しています。

●フィックス・レベル出力(FIXED LEVEL OUTPUT)

DAC単体で使用するための出力を用意しています。

各部の名称

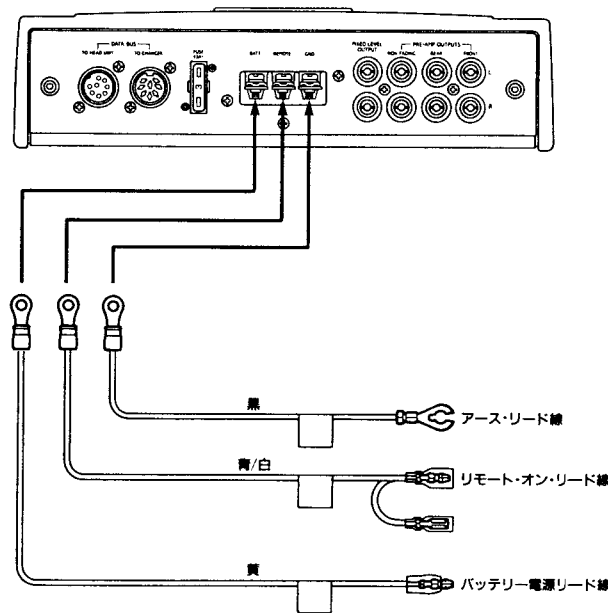


- ① 入力PINジャック
- ② フィックス・レベル出力ON/OFF切りかえスイッチ
- ③ AUXデジタル入力ON/OFF切りかえスイッチ
- ④ AUXデジタル入力ジャック
- ⑤ MASTERデジタル入力ジャック
- ⑥ CHANGERデジタル入力ジャック
- ⑦ ヘッド・ユニット接続DINコネクター
- ⑧ チェンジャー接続DINコネクター
- ⑨ ヒューズ(3A)
- ⑩ バッテリー電源端子(+)
- ⑪ リモート・オン端子
- ⑫ アース端子(-)
- ⑬ フィックス・レベル出力PINジャック
- ⑭ ノンフェーディング出力PINジャック
- ⑮ リア出力PINジャック
- ⑯ フロント出力PINジャック
- ⑰ パワー・インジケータ
- ⑱ サンプリング周波数インジケータ

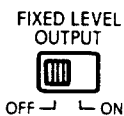
接続

3900はコンバーターですので、音量/音質等の調整はヘッド・ユニットなどの接続ユニット側でおこなってください。

他社製品および純正製品と組み合わせたとき、不具合が発生する場合があります。このような接続については、事前にお買い上げ店またはアルパイン・サービス・インフォメーション・センターにご相談ください。



■FIXEDレベル出力ON/OFF切りかえスイッチ

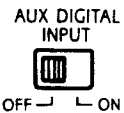


FIXED PRE-OUT機能が付いていない製品および5959(または5959S)と組み合わせるとき「ON」にします。
CHANGERデジタル入力ジャックから入力されたデジタル信号が3900内部でアナログ信号に変換され、FIXEDレベル出力PINジャックに送り出されます。

ご注意

FIXEDレベル出力ON/OFF切りかえスイッチがONのとき、AUXデジタル入力ジャックおよびMASTERデジタル入力ジャックは動きません。

■AUXデジタル入力ON/OFF切りかえスイッチ



■バッテリー電源リード線

常時電流が供給されている端子へ接続してください。

■リモート・オン・リード線

接続ユニットのリモート・オン・リード線に接続します。

■アース・リード線

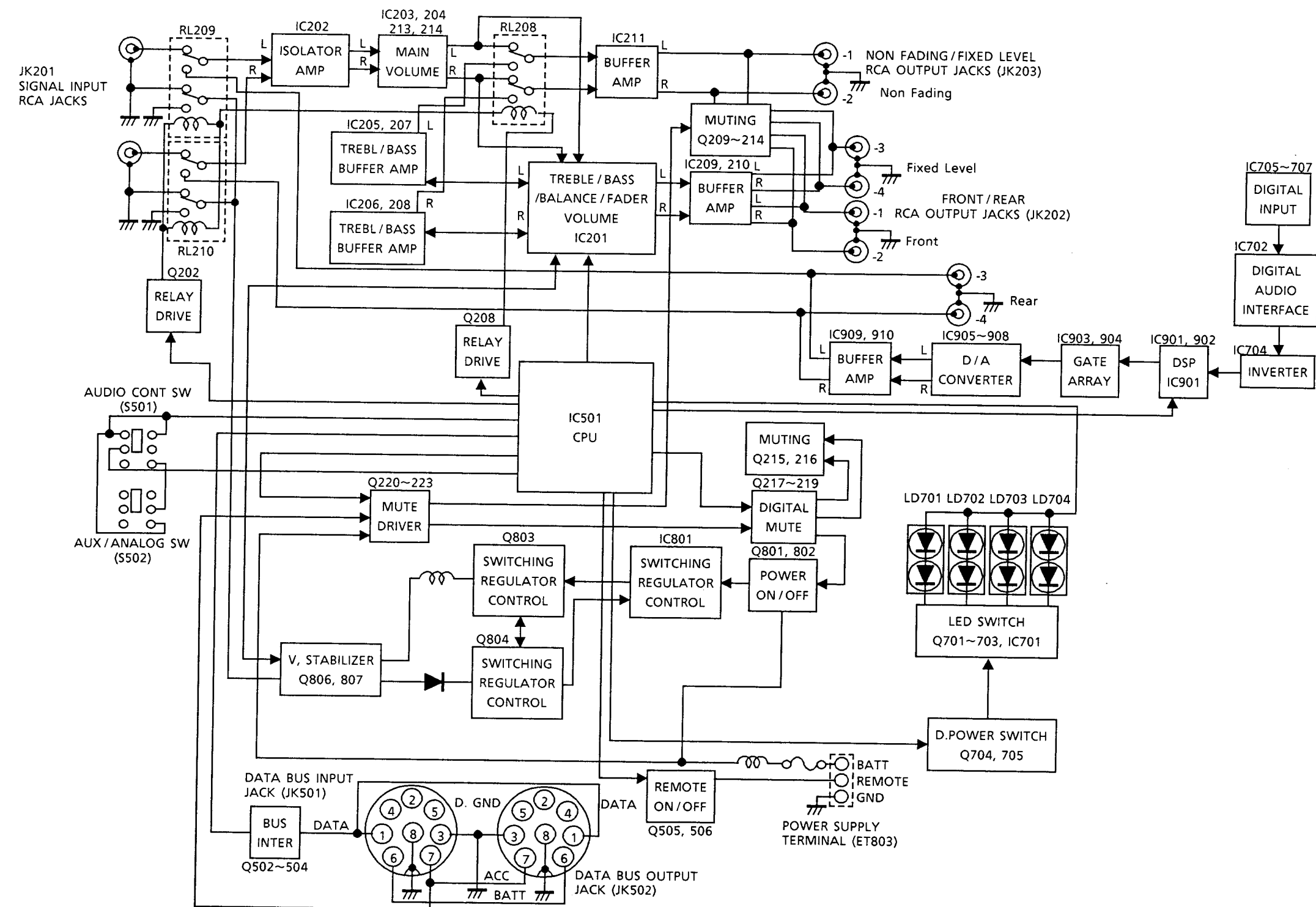
車のボディ等の金属部にビス止めします。アースが不完全ですとセット本体が動作しなかったり、雑音の原因ともなります。

ご注意

はじめにエンジンキーがOFFになっていることを確認後、ショート事故防止のため必ずバッテリーの⊖端子を外してください。

DATやCDプレーヤなどのデジタル出力製品を接続するシステムのときに「ON」にします。

Block Diagram



Packing Assembly Parts List

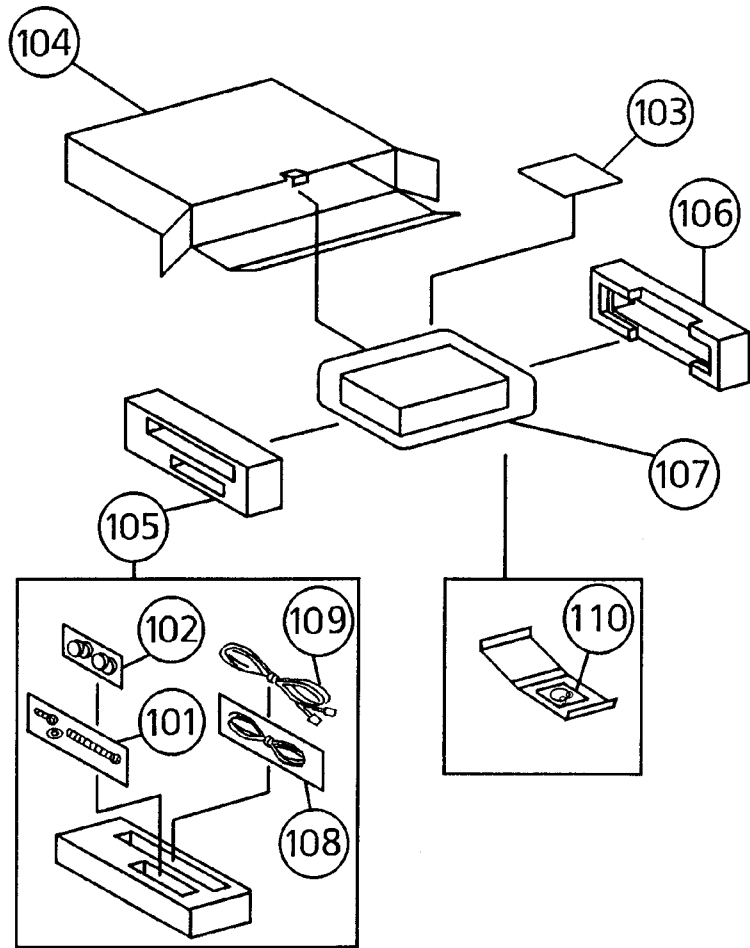
Memo

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
△	101	01V41600W85 Assy., Kit (Screw)	106	56D40539W02	Tray, Packing (R)
☆	101-1	03A48018W01 Bolt, Hex. Tapping (M5×80)	107	56B72811F08	Sack, Polyethylene
△	101-1	03A48018W01 Bolt, Hex. Tapping (M5×80)	108	01T94431F01	Assy., Kit Wire (3P)
☆	101-2	04S40070G78 Washer, Flat Metal (M5.3×10)	109	01T25023W01	Assy., DIN Cable 2M
☆	101-2	04S40070G78 Washer, Flat Metal (M5.3×10)	110	01T45196W01	Assy., Optical Cable
△	101-3	03S71677F08 Screw, Pan (M2.6×8)			
☆	101-3	03S71677F08 Screw, Pan (M2.6×8)			
	102	43B40394W01 Spacer, Base			
○	103	68P40870W40 Owner's Manual			
△	103	68P4087W50 Owner's Manual			
☆	103	68P32052W66 Owner's Manual			
○	104	56S41054W19 Carton, Packing (Individual)			
△	104	56S41054W19 Carton, Packing (Individual)			
☆	104	56S30003W80 Carton, Packing (Individual)			
	105	56D40539W01 Tray, Packing (L)			

Notes: ○ : For North American Model Only,
☆ : For Japanese Model Only,

△ : For General Foreign Model Only,
Others : Common.

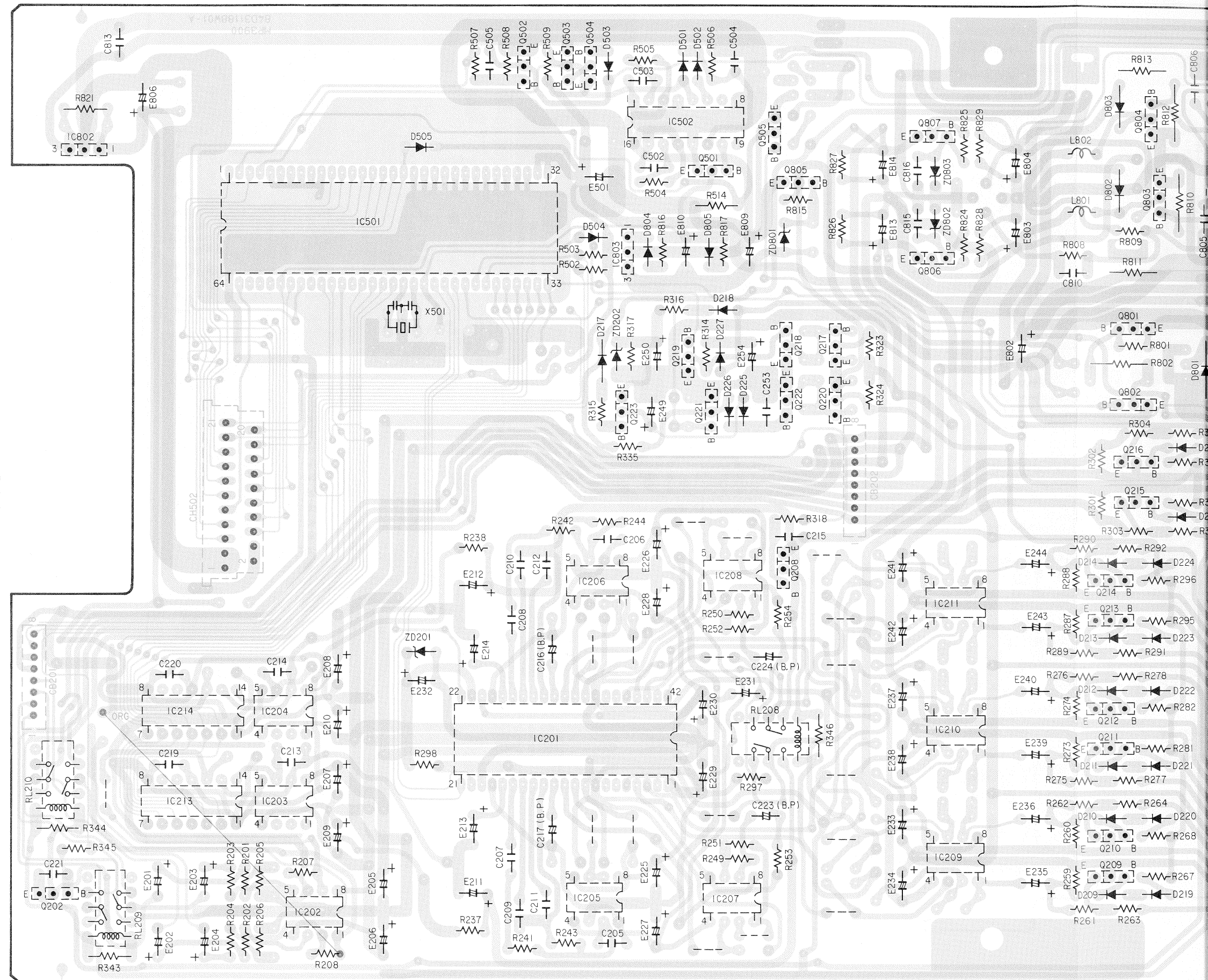
Packing Method View



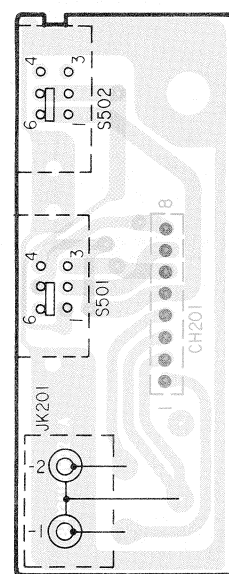
Parts Layout on P.C. Board and Wiring Diagram (1/2)

All P.C. Boards viewed from soldered side.

Audio(1) P. C. Board



Audio (2) P. C. Board



From DAC (1) P.C. Board (CB701)

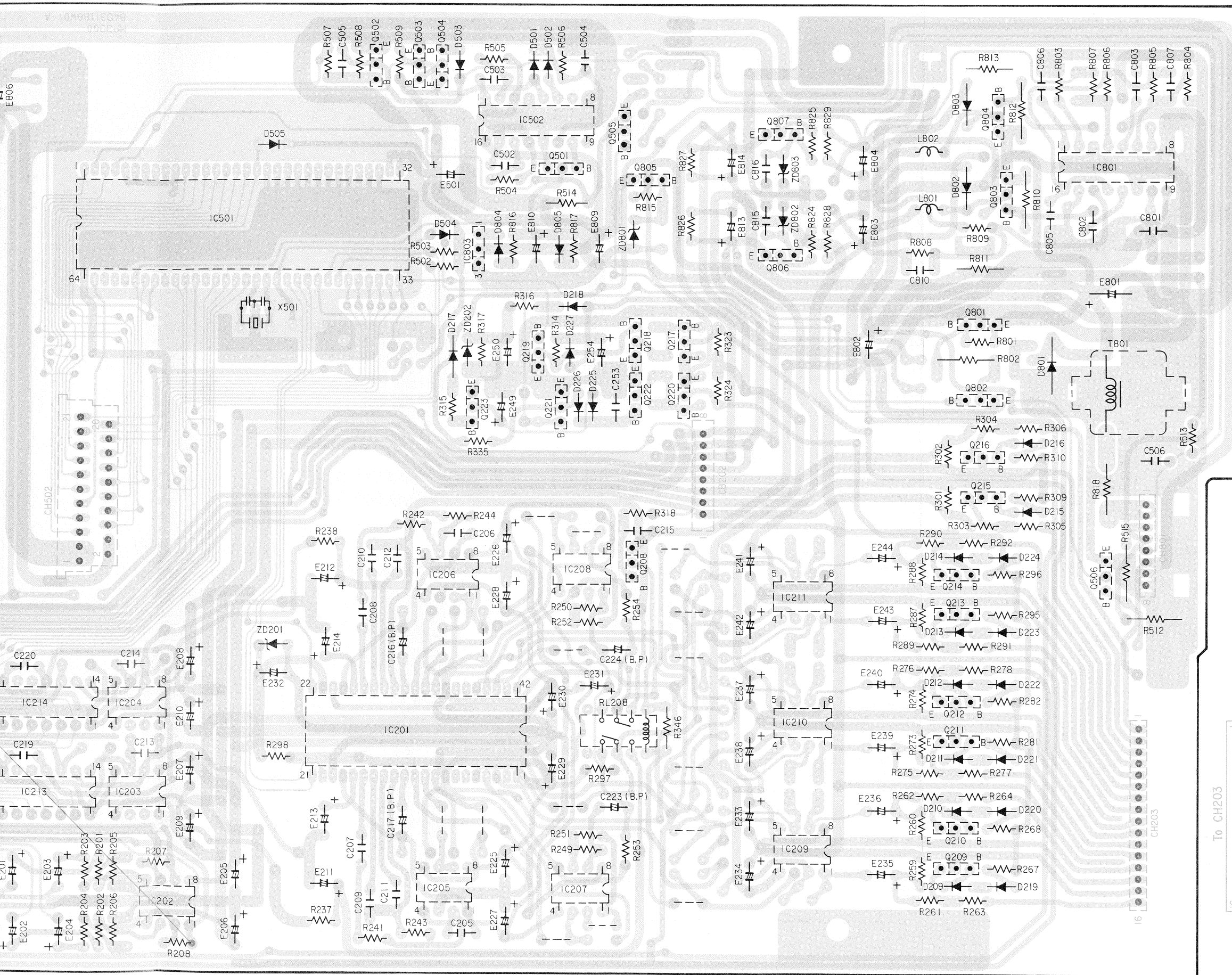
To CH502

To CH2OI

To CB201

Diagram (1/2)

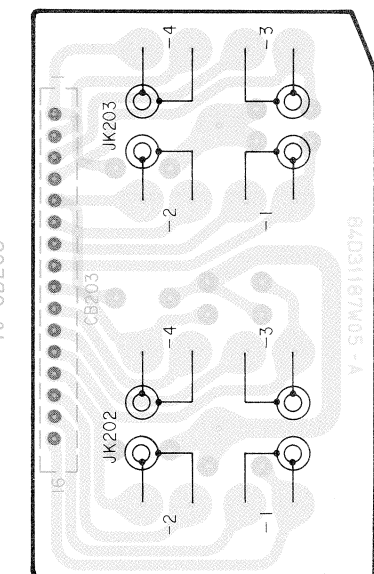
All P.C. Boards viewed from soldered side.

Orange Color Pattern : Component Side Pattern
Blue Color Pattern : Foil Side Pattern

To CH202
From DAC (4) P.C. Board (CH202)

To CH801
From DAC (3) P.C. Board (CB801)

DAC (2) P. C. Board



To CH203

To CB203

D

E

F

- 14 -

G

H

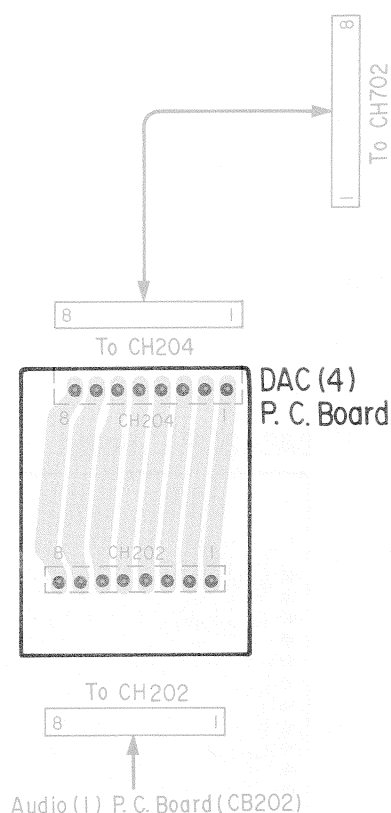
I

J

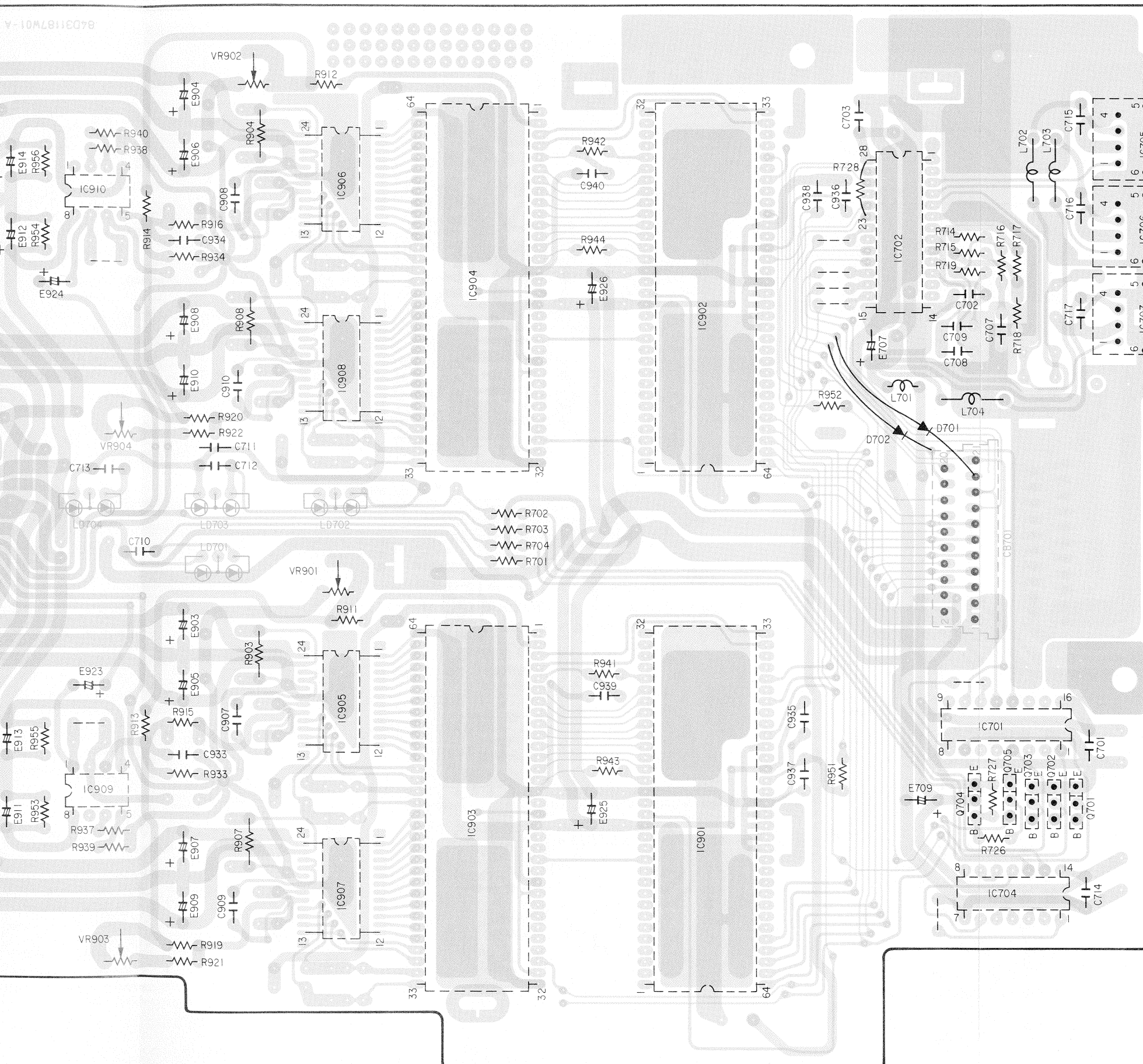
- 15 -

K

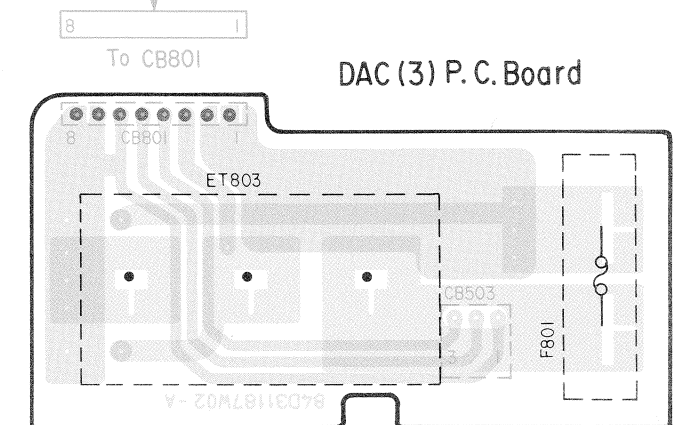
All P.C. Boards viewed from soldered side.



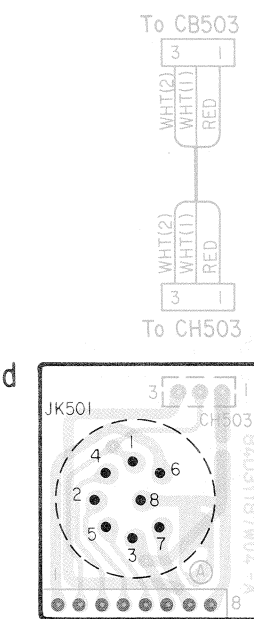
All P.C. Boards viewed from soldered side.



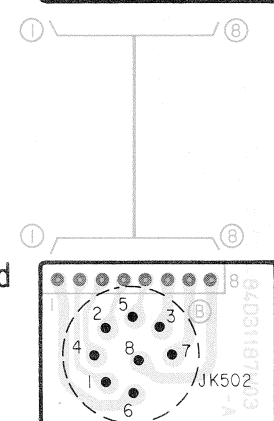
DAC (3) P. C. Board



DIN(2) P. C. Board



DIN(I) P. C. Board



Orange Color Pattern : Component Side Pattern
Blue Color Pattern : Foil Side Pattern

5



Schematic Diagram (2/2)

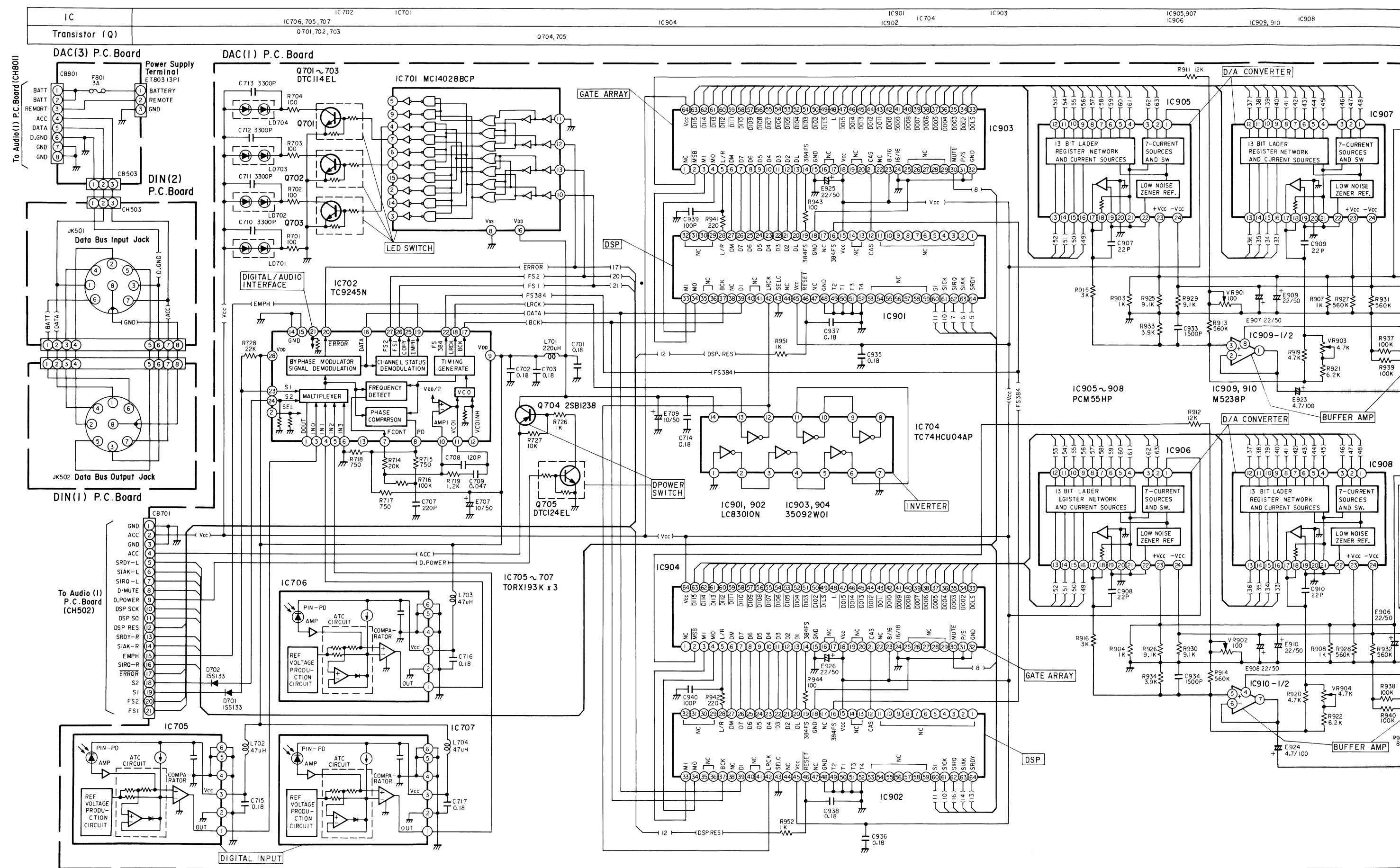
1

2

3

4

5



A

B - 22 -

C

D

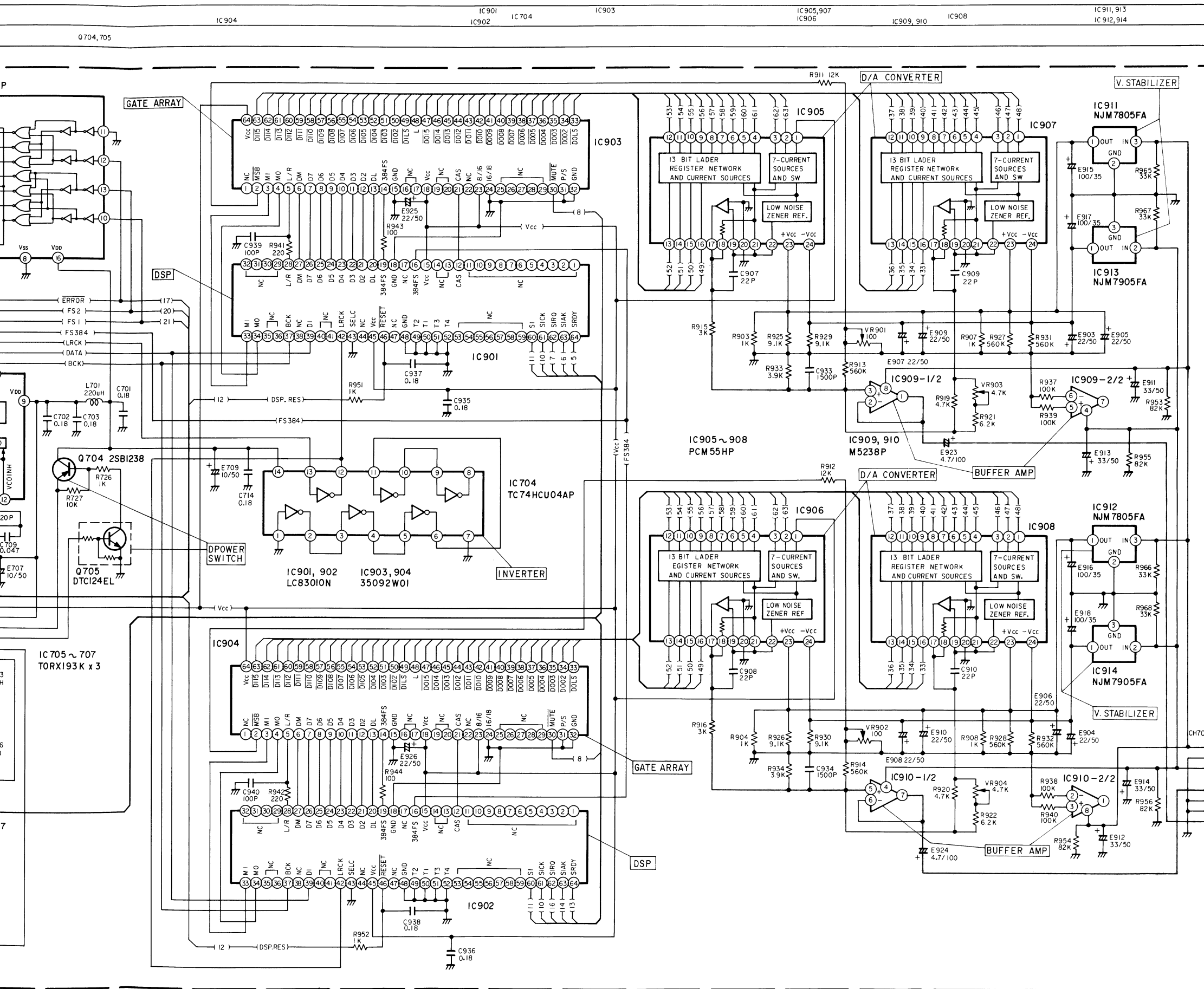
E

- 23 -

F

G

H



IC701

1	4.76V	9	N.C.
2	N.C.	10	0V
3	N.C.	11	0V
4	0V	12	4.87V
5	N.C.	13	0V
6	N.C.	14	N.C.
7	0V	15	N.C.
8	0V	16	4.92V

IC702

1	N.C.	11	1.85V	21	N.C.
2	N.C.	12	N.C.	22	1V
3	1.55V	13	N.C.	23	0.5V
4	0.3V	14	0V	24	0.5V
5	0.3V	15	0V	25	N.C.
6	0V	16	2.4V	26	0V
7	2.48V	17	2.27V	27	0V
8	2.5V	18	2.43V	28	4.87V
9	4.87V	19	0V		
10	2.5V	20	4.86V		

IC704

1	0V	8	N.C.
2	4.92V	9	0V
3	4.92V	10	0V
4	0V	11	4.92V
5	0V	12	0V
6	4.92V	13	2.46V
7	4.92V	14	4.92V

IC705, 706

1	0.3V	1	1.55V
2	0V	2	0V
3	4.8V	3	4.8V
4	0V	4	0V
5	0V	5	0V
6	0V	6	0V

IC707

1	1.55V	1	1.55V
2	0V	2	0V
3	4.8V	3	4.8V
4	0V	4	0V
5	0V	5	0V
6	0V	6	0V

IC901

1	N.C.	17	N.C.	33	1.66V	49	0V
2	N.C.	18	0V	34	1.67V	50	0V
3	N.C.	19	0V	35	N.C.	51	0V
4	N.C.	20	2.52V	36	N.C.	52	0V
5	N.C.	21	2.52V	37	2.27V	53	N.C.
6	N.C.	22	2.52V	38	N.C.	54	N.C.
7	N.C.	23	2.52V	39	2.4V	55	N.C.
8	N.C.	24	2.52V	40	N.C.	56	N.C.
9	N.C.	25	2.52V	41	N.C.	57	N.C.
10	N.C.	26	2.52V	42	2.46V	58	N.C.
11	N.C.	27	2.52V	43	0V	59	N.C.
12	3.74V	28	3.75V	44	N.C.	60	0V
13	N.C.	29	N.C.	45	4.97V	61	5.24V
14	N.C.	30	N.C.	46	5.22V	62	5.24V
15	4.97V	31	N.C.	47	N.C.	63	4.97V
16	1.07V	32	N.C.	48	0V	64	5.24V

IC902

1	N.C.	17	N.C.	33	PS	49	0V
2	N.C.	18	0V	34	PS	50	0V
3	N.C.	19	2.19V	35	N.C.	51	0V
4	N.C.	20	PS	36	N.C.	52	0V
5	N.C.	21	PS	37	PS	53	N.C.
6	N.C.	22	PS	38	N.C.	54	N.C.
7	N.C.	23	PS	39	PS	55	N.C.
8	N.C.	24	PS	40	N.C.	56	N.C.
9	N.C.	25	PS	41	N.C.	57	N.C.
10	N.C.	26	PS	42	PS	58	N.C.
11	N.C.	27	PS	43	0V	59	N.C.
12	3.74V	28	PS	44	N.C.	60	0V
13	N.C.	29	N.C.	45	4.97V	61	PS
14	N.C.	30	N.C.	46	PS	62	PS
15	4.97V	31	N.C.	47	N.C.	63	PS
16	1.06V	32	N.C.	48	0V	64	PS

IC903, 904

1	N.C.	17	N.C.	33	PS	49	PS
2	PS	18	4.97V	34	PS	50	PS
3	PS	19	N.C.	35	PS	51	PS
4	PS	20	N.C.	36	PS	52	PS
5	PS	21	PS	37	PS	53	PS
6	PS	22	N.C.	38	PS	54	PS
7	PS	23	4.97V	39	PS	55	PS
8	PS	24	0V	40	PS	56	PS
9	PS	25	N.C.	41	PS	57	PS
10	PS	26	N.C.	42	PS	58	PS
11	PS	27	N.C.	43	PS	59	PS
12	PS	28	N.C.	44	PS	60	PS
13	PS	29	N.C.	45	PS	61	PS
14	PS	30	PS	46	PS	62	PS
15	0V	31	0V	47	PS	63	PS
16	N.C.	32	0V	48	0V	64	4.97V

IC905

1	4.97V	9	PS	17	0V
2	PS	10	PS	18	0V
3	PS	11	PS	19	0V
4	PS	12	PS	20	0V
5	PS	13	PS	21	0V
6	PS	14	PS	22	0V
7	PS	15	PS	23	5.08V
8	PS	16	PS	24	-4.98V

IC906

1	4.97V	9	PS	17	0V
2	PS	10	PS	18	0V
3	PS	11	PS	19	0V
4	PS	12	PS	20	0V
5	PS	13	PS	21	0V
6	PS	14	PS	22	0V
7	PS	15	PS	23	5.11V
8	PS	16	PS	24	-4.96V

IC907

1	0V	9	PS	17	0V
2	PS	10	PS	18	0V
3	PS	11	PS	19	0V
4	PS	12	PS	20	0V
5	PS	13	PS	21	0V
6	PS	14	PS	22	0V
7	PS	15	PS	23	5.08V
8	PS	16	PS	24	-4.98V

IC908

1	0V	9	PS	17	0V
2	PS	10	PS	18	0V
3	PS	11	PS	19	0V
4	PS	12	PS	20	0V
5	PS	13	PS	21	0V
6	PS	14	PS	22	0V
7	PS	15	PS	23	5.11V
8	PS	16	PS	24	-4.97V

IC909

1	0V	9	PS	17	0V
2	PS	10	PS	18	0V
3	PS	11	PS	19	0V
4	PS	12	PS	20	0V
5	PS	13	PS	21	0V
6	PS	14	PS	22	0V
7	PS	15	PS	23	5.08V
8	PS	16	PS	24	-4.98V

IC910

1	N.C.	9	PS	17	0V
2	0V	10	PS	18	0V
3	0V	11	PS	19	0V
4	-7.21V	12	PS	20	0V
5	0V	13	PS	21	0V
6	0V	14	PS	22	0V
7	N.C.	15	PS	23	5.11V
8	7.25V	16	PS	24	-4.97V

IC911

1	5.08V	9	PS	17	0V
2	0V	10	PS	18	0V
3	7.25V	11	PS	19	0V
4	-7.21V	12	PS	20	0V
5	0V	13	PS	21	0V
6	0V	14	PS	22	0V
7	0V	15	PS	23	5.11V
8	7.25V	16	PS	24	-4.97V

IC912

1	5.11V	9	PS	17	0V
2	0V	10	PS	18	0V
3	7.25V	11	PS	19	0V
4	-7.21V	12	PS	20	0V
5	0V	13	PS	21	0V
6	0V	14	PS	22	0V
7	0V	15	PS	23	5.11V
8	7.25V	16	PS	24	-4.97V

IC913

1	-4.98V	9	PS	17	0V
2	-7.21V	10	PS	18	0V
3	0V	11	PS	19	0V
4	-7.21V	12	PS	20	0V
5	0V	13	PS	21	0V
6	0V	14	PS	22	0V
7	0V	15	PS	23	5.11V
8	7.25V	16	PS	24	-4.97V

IC914

1	-4.97V	9	PS	17	0V
2	-7.21V	10	PS	18	0V
3	0V	11	PS	19	0V
4	-7.21V	12	PS	20	0V
5	0V	13	PS	21	0V
6	0V	14	PS	22	0V
7	0V	15	PS	23	5.11V
8	7.25V	16	PS	24	-4.97V

IC915

1	0V	9	PS	17	0V
2	PS	10	PS	18	0V
3	PS	11	PS	19	0V
4	PS	12	PS	20	0V
5	PS	13	PS	21	0V
6	PS	14	PS	22	0V
7	PS	15	PS	23	5.08V
8	PS	16	PS	24	-4.98V

IC916

1	0V	9	PS	17	0V
2	PS	10	PS	18	0V
3	PS	11	PS	19	0V
4	PS	12	PS	20	0V
5	PS	13	PS	21	0V
6	PS	14	PS	22	0V
7	PS	15	PS	23	5.08V
8	PS	16	PS	24	-4.98V

IC917

1	0V	9	PS	17	0V
2	PS	10	PS	18	0V
3	PS	11	PS	19	0V
4	PS	12	PS	20	0V
5	PS	13	PS	21	0V
6	PS	14	PS	22	0V
7	PS	15	PS	23	5.08V
8	PS	16	PS	24	-4.98V

IC918

Resistance values are in ohms. $K =$

Electrical Parts List

Resistor : Carbon resistors under 1 / 4 watts are not mentioned in the parts list, please confirm them by schematic diagram.

Capacitor : μ F = microfarads, pF = picofarads

Abbreviations			Symbol No.	Part No.	Description
RES. = Resistor	CAP. = Capacitor		Q217	48T82762F03	DTA124EL
C.F. = Carbon Film	ELY. = Electrolytic		Q218	48T82763F03	DTC124EL
M.F. = Metal Film	CER. = Ceramic		Q219	48T82763F03	DTC124EL
M.O. = Metal Oxide Film	MYL. = Mylar		Q220	48T82762F03	DTA124EL
M.P. = Metal Plate	TAN. = Tantalum		Q221	48T82763F03	DTC124EL
TR. = Transistor	POLY. = Polystyrol		Q222	48T82763F03	DTC124EL
TRANS. = Transformer	PP. = Polypropylene		Q223	48T82757F01	2SA1561
CP. = Chip	PLT. = Polyethylene		Q501	48T82763F03	DTC124EL
	PF. = Polyester Film		Q502	48T82758F01	2SC4038
			Q503	48T82763F04	DTC144EL
Audio P. C. Board			Q504	48T82762F04	DTA144EL
IC's			Q505	48T82762F03	DTA124EL
IC201	51T72016F01	LC7537N	Q506	48T82763F03	DTC124EL
IC202	51T80136F01	M5238P	Q801	48T15701W01	2SB1360
IC203	51T25576W01	NJM4580D	Q802	48T82763F03	DTC124EL
IC204	51T25576W01	NJM4580D			
IC205	51T80136F01	M5238P	Q803	48T69177F01	2SA1358
IC206	51T80136F01	M5238P	Q804	48T69177F01	2SA1358
IC207	51T80136F01	M5238P	Q805	48T15289W01	2SD2008
IC208	51T80136F01	M5238P	Q806	48T69176F02	2SC3421
IC209	51T80136F01	M5238P	Q807	48T69177F01	2SA1358
IC210	51T80136F01	M5238P			
IC211	51T80136F01	M5238P			
IC213	51T45099W01	AD7118KN			
IC214	51T45099W01	AD7118KN			
IC501	51T35254W01	35254W01			
or	51T92250F03	92250F03			
IC502	51T16454W01	BU4538B			
IC801	51T35309W02	MB3775			
IC802	51T80338F01	NJM7805FA			
IC803	51T72309F01	MN1280-S			
Transistors			Diodes		
Q202	48T69176F02	2SC3421	D209	48T68828F01	1SS133
Q208	48T69176F02	2SC3421	D210	48T68828F01	1SS133
Q209	48T90183F01	2SD1996	D211	48T68828F01	1SS133
Q210	48T90183F01	2SD1996	D212	48T68828F01	1SS133
Q211	48T90183F01	2SD1996	D213	48T68828F01	1SS133
Q212	48T90183F01	2SD1996	D214	48T68828F01	1SS133
Q213	48T90183F01	2SD1996	D215	48T68828F01	1SS133
Q214	48T90183F01	2SD1996	D216	48T68828F01	1SS133
Q215	48T90183F01	2SD1996	D217	48T74541F01	1SS83
Q216	48T90183F01	2SD1996	D218	48T68828F01	1SS133
			D219	48T68828F01	1SS133
			D220	48T68828F01	1SS133
			D221	48T68828F01	1SS133
			D222	48T68828F01	1SS133
			D223	48T68828F01	1SS133
			D224	48T68828F01	1SS133
			D225	48T68828F01	1SS133
			D226	48T68828F01	1SS133
			D227	48T68828F01	1SS133
			D501	48T68828F01	1SS133

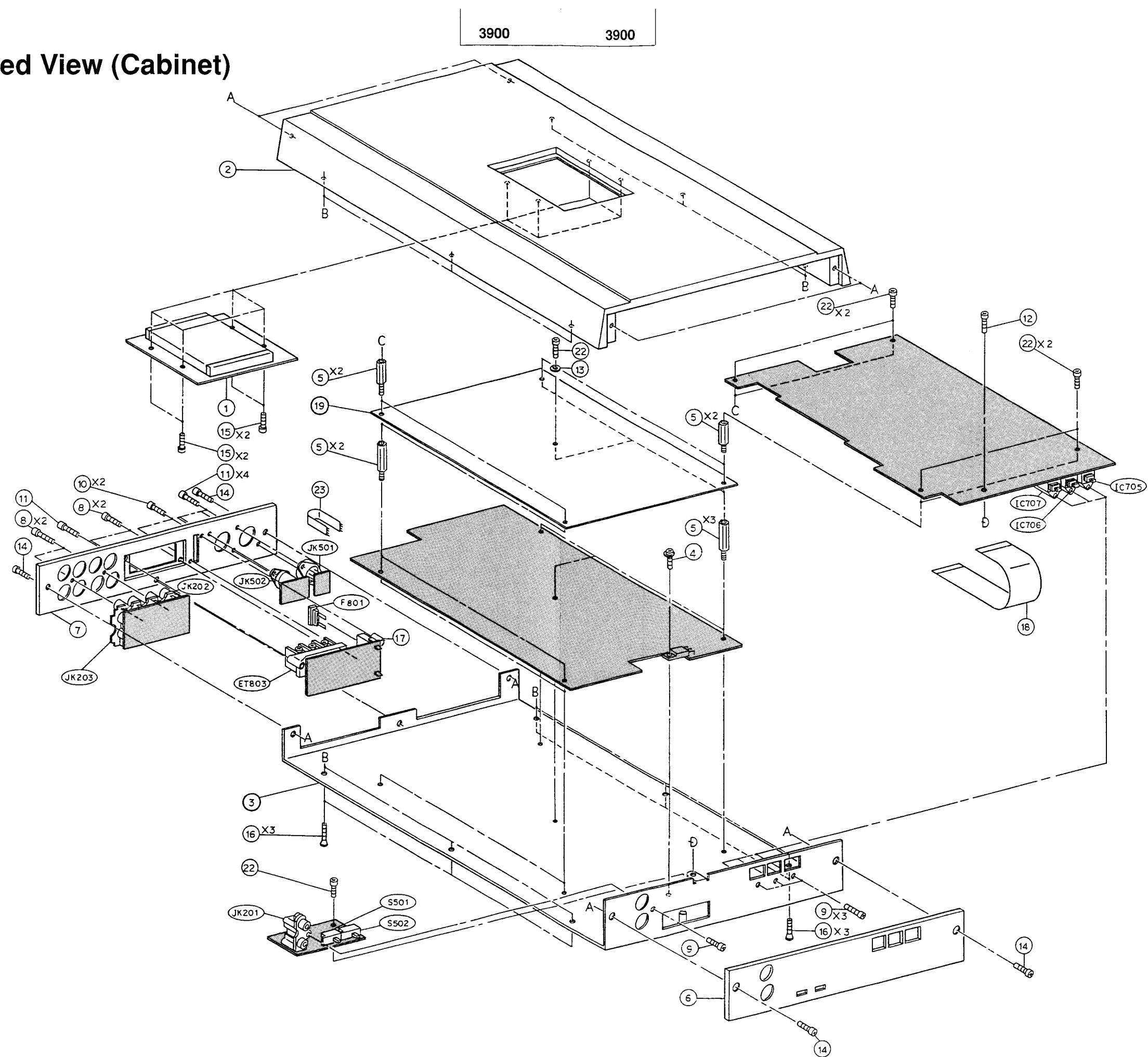
Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
D502	48T68828F01	1SS133	C208	08T90316F09	TF, 2200pF
D503	48T68828F01	1SS133	E208	23T00180L26	ELY., 22 μ F / 50V
D504	48T68828F01	1SS133	C209	08T90316F30	TF, 0.12 μ F
D505	48T68828F01	1SS133	E209	23T00180L26	ELY., 22 μ F / 50V
D801	48T81044F01	10E2	C210	08T90316F30	TF, 0.12 μ F
D802	48T25664W01	Schottky, RB100A	E210	23T00180L26	ELY., 22 μ F / 50V
D803	48T25664W01	Schottky, RB100A	C211	08T90316F30	TF, 0.12 μ F
D804	48T68828F01	1SS133	E211	23T00180L25	ELY., 10 μ F / 50V
D805	48T68828F01	1SS133	C212	08T90316F30	TF, 0.12 μ F
ZD201	48T91071F11	Zener, HZS5BLL	E212	23T00180L25	ELY., 10 μ F / 50V
ZD202	48T83128F25	Zener, HZS9C1L	C213	08T81196F06	MICA, 10pF
ZD801	48T83128F05	Zener, HZS6B2L	E213	23T00180L25	ELY., 10 μ F / 50V
ZD802	48T83128F18	Zener, HZS7C3L	C214	08T81196F06	MICA, 10pF
ZD803	48T83128F18	Zener, HZS7C3L	E214	23T00180L25	ELY., 10 μ F / 50V
Relays			C215	08T90316F11	TF, 3300pF
RL208	80T25747W01	A12W-K	C216	23T61177F09	ELY., (B.P) 10 μ F / 16V
RL209	80T25747W01	A12W-K	C217	23T61177F09	ELY., (B.P) 10 μ F / 16V
RL210	80T25747W01	A12W-K	C219	08T90316F32	TF, 0.18 μ F
Coils / Crystal			C220	08T90316F32	TF, 0.18 μ F
L801	24T16271W13	Coil, 220 μ H	C221	08T90316F11	TF, 3300pF
L802	24T16271W13	Coil, 220 μ H	C223	23T61177F09	ELY., (B.P) 10 μ F / 16V
X501	91T15285W01	CER., Lock 4.19MHz	C224	23T61177F09	ELY., (B.P) 10 μ F / 16V
Transfomer			E225	23T00180L26	ELY., 22 μ F / 50V
T801	25C40894G06	Choke	E226	23T00180L26	ELY., 22 μ F / 50V
Capacitors			E227	23T00180L26	ELY., 22 μ F / 50V
E201	23T00180L25	ELY., 10 μ F / 50V	E228	23T00180L26	ELY., 22 μ F / 50V
E202	23T00180L25	ELY., 10 μ F / 50V	E229	23T00180L26	ELY., 22 μ F / 50V
E203	23T00180L25	ELY., 10 μ F / 50V	E230	23T00180L26	ELY., 22 μ F / 50V
E204	23T00180L25	ELY., 10 μ F / 50V	E231	23T00180L25	ELY., 10 μ F / 50V
C205	08T81196F14	MICA, 22pF	E232	23T00180L25	ELY., 10 μ F / 50V
E205	23T00180L26	ELY., 22 μ F / 50V	E233	23T00180L26	ELY., 22 μ F / 50V
C206	08T81196F14	MICA, 22pF	E234	23T00180L26	ELY., 22 μ F / 50V
E206	23T00180L26	ELY., 22 μ F / 50V	E235	23T61177F06	ELY., 4.7 μ F / 100V
C207	08T90316F09	TF, 2200pF	E236	23T61177F06	ELY., 4.7 μ F / 100V
E207	23T00180L26	ELY., 22 μ F / 50V	E237	23T00180L26	ELY., 22 μ F / 50V
			E238	23T00180L26	ELY., 22 μ F / 50V
			E239	23T61177F06	ELY., 4.7 μ F / 100V
			E240	23T61177F06	ELY., 4.7 μ F / 100V
			E241	23T00180L26	ELY., 22 μ F / 50V
			E242	23T00180L26	ELY., 22 μ F / 50V
			E243	23T61177F06	ELY., 4.7 μ F / 100V
			E244	23T61177F06	ELY., 4.7 μ F / 100V
			E249	23T00180L25	ELY., 10 μ F / 50V
			E250	23T00180L26	ELY., 22 μ F / 50V
			C253	08T90316F11	TF, 3300pF
			E254	23T00181L47	ELY., 47 μ F / 50V
			E501	23T00180L26	ELY., 22 μ F / 50V
			C502	08T90316F29	TF, 0.1 μ F
			C503	08T90316F29	TF, 0.1 μ F
			C504	08T93406F01	PP., 100pF
			C505	08T90316F01	TF, 470pF
			C506	08T93406F15	PP., 390pF

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
C801	08T90316F29	TF, 0.1 μ F	Transistors / Diodes		
E801	23T35119W03	ELY., 2200 μ F / 16V	Q701	48T82763F02	DTC114EL
C802	08T90316F29	TF, 0.1 μ F	Q702	48T82763F02	DTC114EL
E802	23T00180L26	ELY., 22 μ F / 50V	Q703	48T82763F02	DTC114EL
C803	08T90316F29	TF, 0.1 μ F	Q704	48T84234F03	2S81238
E803	23T00181L20	ELY., 470 μ F / 16V	Q705	48T82763F03	DTC124EL
E804	23T00181L20	ELY., 470 μ F / 16V	D701	48T68828F01	Diode, 1SS133
C805	08T90316F29	TF, 0.1 μ F	D702	48T68828F01	Diode, 1SS133
C806	08T90316F04	TF, 820pF	LED's		
E806	23T00181L11	ELY., 330 μ F / 10V	LD701	48T60946F01	LD603VR (RED)
C807	08T90316F29	TF, 0.1 μ F	LD702	48T60946F01	LD603VR (RED)
E809	23T00180L26	ELY., 22 μ F / 50V	LD703	48T60946F01	LD603VR (RED)
C810	08T90316F13	TF, 4700pF	LD704	48T60946F01	LD603VR (RED)
E810	23T00180L22	ELY., 2.2 μ F / 50V	Coils		
C813	08T25927W07	CER., 0.1 μ F	L701	24T16271W13	220 μ F
E813	23T00180L18	ELY., 100 μ F / 35V	L702	24T50508F30	47 μ H
E814	23T00180L18	ELY., 100 μ F / 35V	L703	24T50508F30	47 μ H
C815	08T90316F32	TF, 0.18 μ F	L704	24T50508F30	47 μ H
C816	08T90316F32	TF, 0.18 μ F	Capacitors		
Resistor			C701	08T90316F32	TF, 0.18 μ F
R818	06T71921F21	Cement, 1 ohm 2W	C702	08T90316F32	TF, 0.18 μ F
DAC P. C. Board			C703	08T90316F32	TF, 0.18 μ F
IC's			C707	08T00151L05	CS3, 220pF
IC701	51T51782F01	MC14028BCP	E707	23T00180L25	ELY., 10 μ F / 50V
IC702	51T45037W01	TC9245N	C708	08T00151L02	CS3, 120pF
IC704	51T80475F01	TC74HCU04AP	C709	08T90316F25	TF, 0.047 μ F
IC901	51T45098W01	LC83010N	E709	23T00180L25	ELY., 10 μ F / 50V
IC902	51T45098W01	LC83010N	C710	08T90316F11	TF, 3300pF
IC903	51T35092W01	35092W01	C711	08T90316F11	TF, 3300pF
IC904	51T35092W01	35092W01	C712	08T90316F11	TF, 3300pF
IC905	51T72744F01	PCM55HP	C713	08T90316F11	TF, 3300pF
IC906	51T72744F01	PCM55HP	C714	08T90316F32	TF, 0.18 μ F
IC907	51T72744F01	PCM55HP	C715	08T90316F32	TF, 0.18 μ F
IC908	51T72744F01	PCM55HP	C716	08T90316F32	TF, 0.18 μ F
IC909	51T80136F01	M5238P	C717	08T90316F32	TF, 0.18 μ F
IC910	51T80136F01	M5238P	E903	23T00180L26	ELY., 22 μ F / 50V
IC911	51T80338F01	NJM7805FA	E904	23T00180L26	ELY., 22 μ F / 50V
IC912	51T80338F01	NJM7805FA	E905	23T00180L26	ELY., 22 μ F / 50V
IC913	51T80339F01	NJM7905FA	E906	23T00180L26	ELY., 22 μ F / 50V
IC914	51T80339F01	NJM7905FA			

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
C907	08T81196F14	MICA, 22pF	Miscellaneous		
E907	23T00180L26	ELY., 22 μ F / 50V	ET803	29T94650F01	Power Supply Terminal (3P)
C908	08T81196F14	MICA, 22pF	F801	65S58596F01	Fuse, Auto (3A)
E908	23T00180L26	ELY., 22 μ F / 50V	IC705	51T45265W01	TORX193K
C909	08T81196F14	MICA, 22pF	IC706	51T45265W01	TORX193K
E909	23T00180L26	ELY., 22 μ F / 50V	IC707	51T45265W01	TORX193K
C910	08T81196F14	MICA, 22pF	JK201	09T84616F02	Signal Input RCA Jacks
E910	23T00180L26	ELY., 22 μ F / 50V	JK202	09T81475F01	Front/Rear RCA Output Jacks
E911	23T00181L46	ELY., 33 μ F / 50V	JK203	09T81475F01	Fixed Level/Non Fading RCA Output Jacks
E912	23T00181L46	ELY., 33 μ F / 50V	JK501	09T16162W05	Data Bus Input Jack
E913	23T00181L46	ELY., 33 μ F / 50V	JK502	09T82054F01	Data Bus Output Jack
E914	23T00181L46	ELY., 33 μ F / 50V	S501	40T25473W02	Switch, Slide SSSF1 (AUDIO CONT)
E915	23T00180L18	ELY., 100 μ F / 35V	S502	40T25473W02	Switch, Slide SSSF1 (AUX)
E916	23T00180L18	ELY., 100 μ F / 35V			
E917	23T00180L18	ELY., 100 μ F / 35V			
E918	23T00180L18	ELY., 100 μ F / 35V			
E923	23T61177F06	ELY., 4.7 μ F / 100V			
E924	23T61177F06	ELY., 4.7 μ F / 100V			
E925	23T00180L26	ELY., 22 μ F / 50V			
E926	23T00180L26	ELY., 22 μ F / 50V			
C933	08T00151L15	CS3, 1500pF			
C934	08T00151L15	CS3, 1500pF			
C935	08T90316F32	TF, 0.18 μ F			
C936	08T90316F32	TF, 0.18 μ F			
C937	08T90316F32	TF, 0.18 μ F			
C938	08T90316F32	TF, 0.18 μ F			
C939	08T81196F34	MICA, 100pF			
C940	08T81196F34	MICA, 100pF			
Resistors					
VR901	18T15805W01	Volume, Metal 100ohm			
VR902	18T15805W01	Volume, Metal 100ohm			
VR903	18T15805W11	Volume, Metal 4.7Kohm			
VR904	18T15805W11	Volume, Metal 4.7Kohm			

Exploded View (Cabinet)

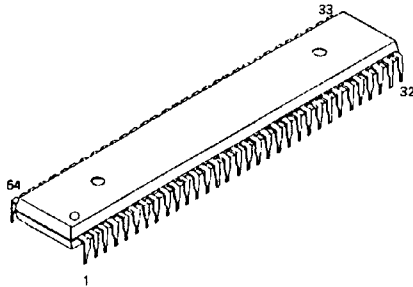
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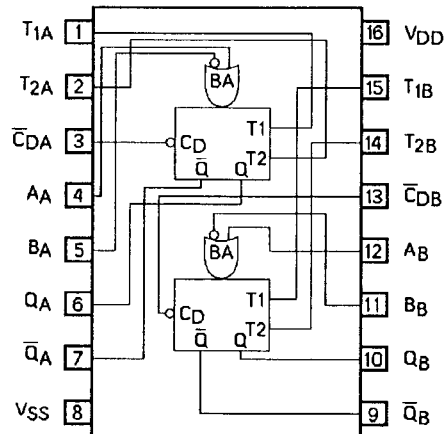
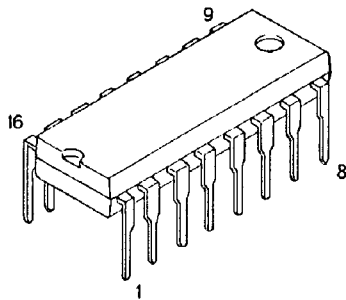
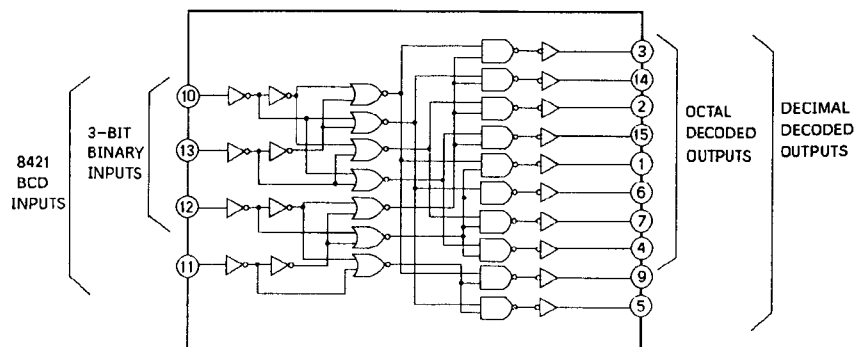
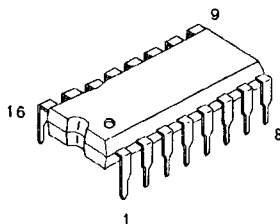
Cabinet Assembly Parts List

Note : The parts without parts list are not supplied.

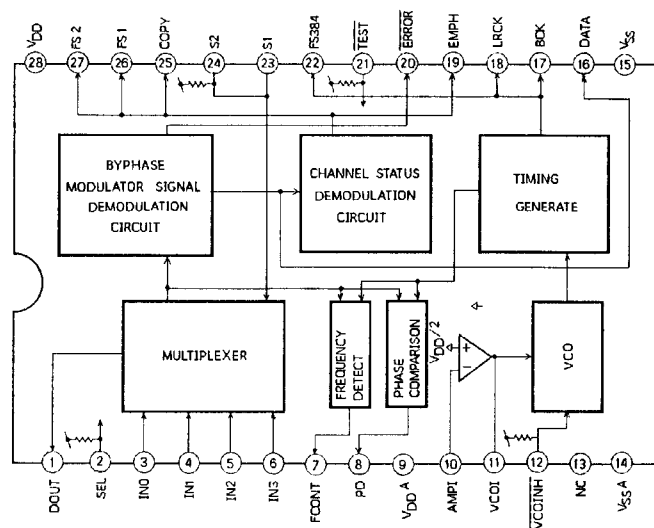
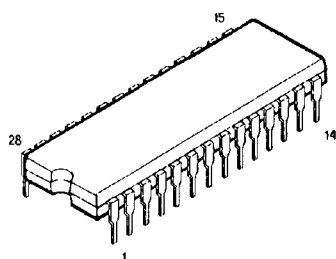
Symbol No.	Index	Part No.	Description	Symbol No.	Index	Part No.	Description
1	2-B	34A40391W01	Assy., Scale Plate				
2	2-B	15D40396W01	Cover, Top				
4	3-E	03C42723U08	Screw, Cup (M2.6×5)				
5		46A40395W01	Stud, P.C.Board				
6	5-E	15C40397W01	Cover, Side (L)				
7	3-B	15C40398W01	Cover, Side (R)				
8		03S68555F13	Screw, Pan (M3×10)				
9		03S68555F01	Screw, Pan (M3×8)				
10	3-B	03S68555F24	Screw, Pan (M2×8)				
11		03S44205G76	Screw, Pan (M2.6×8)				
12	2-G	03S44205G07	Screw, Pan (M2.6×5)				
13	2-D	04S40072G16	Washer, Lock (M3)				
14		03B40942T02	Bolt, Hex. W/Washer (M3×8)				
15		03S71677F02	Screw, Pan (M2.6×6)				
16		03S71677F23	Screw, Countersink (M3×8)				
17	3-C	09T70751F01	Holder, Auto Fuse 1P				
18	3-F	30T15818W08	Flat, Cable 21P				
22		03S40011G89	Screw, Pan (M2.6×6)				
23	3-C	30T15127W14	Flat, Cable 8P				

35254W01 : IC501

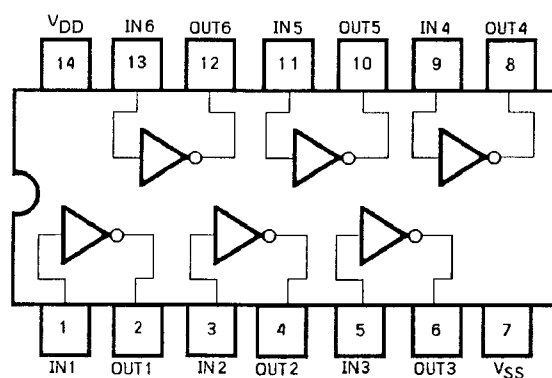
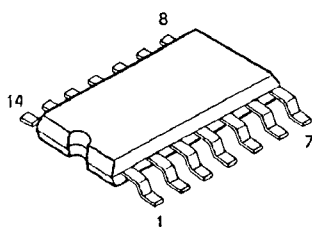
PIN NO.	CODE ADDRESS	I/O	PIN NO.	CODE ADDRESS	I/O	PIN NO.	CODE ADDRESS	I/O
1	SI/AK R	I	23	V _{SS}	—	45	RESET	I
2	I ACC	—	24	V _{SS}	—	46	X2	—
3	ERROR	I	25	V _{SS}	—	47	X1	—
4	I BUS	I	26	V _{SS}	—	48	VB 3	0
5	V _{SS}	—	27	V _{SS}	—	49	VB 2	0
6	V _{SS}	—	28	V _{SS}	—	50	VB 1	0
7	V _{SS}	—	29	V _{SS}	—	51	VB 0	0
8	V _{SS}	—	30	V _{SS}	—	52	NC	—
9	V _{SS}	—	31	+5V	—	53	TCNT	0
10	V _{SS}	—	32	+5V	—	54	VB 5	0
11	SIRO R	0	33	PWR ON	0	55	VB 4	0
12	SRDY R	0	34	A SEL	0	56	NC	—
13	SIRO L	0	35	D SEL 2	0	57	Q BUS	0
14	SRDY L	0	36	D SEL 1	0	58	DSP RES	0
15	SI/AK L	I	37	FS 2	I	59	D MUTE	0
16	DSP SD	0	38	FS 1	I	60	NC	—
17	DSP SCK	I	39	AUX/REM	I	61	NC	—
18	EMPH	I	40	A CNT	I	62	NC	—
19	V _{SS}	—	41	A MUTE	0	63	D POWER	0
20	V _{SS}	—	42	EV DATA	0	64	V _{SS}	—
21	V _{SS}	—	43	EV CLK	0			
22	V _{SS}	—	44	EV CE	0			

BU4538B : IC502**MC14028BCP : IC701**

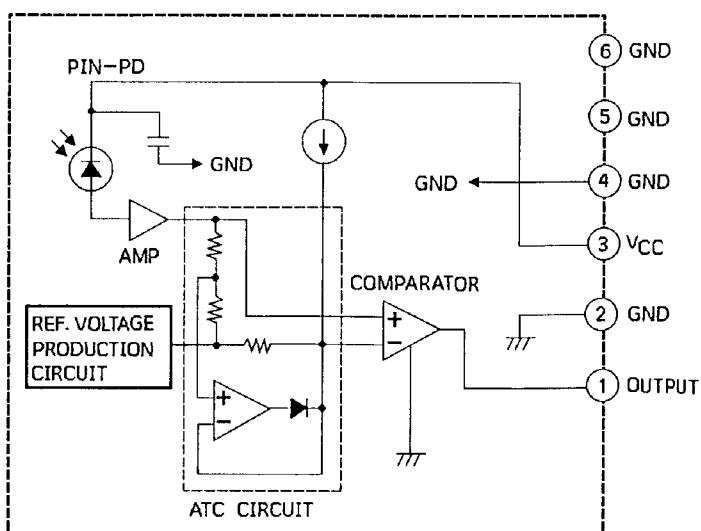
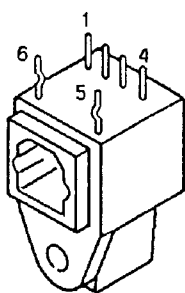
TC9245N : IC702

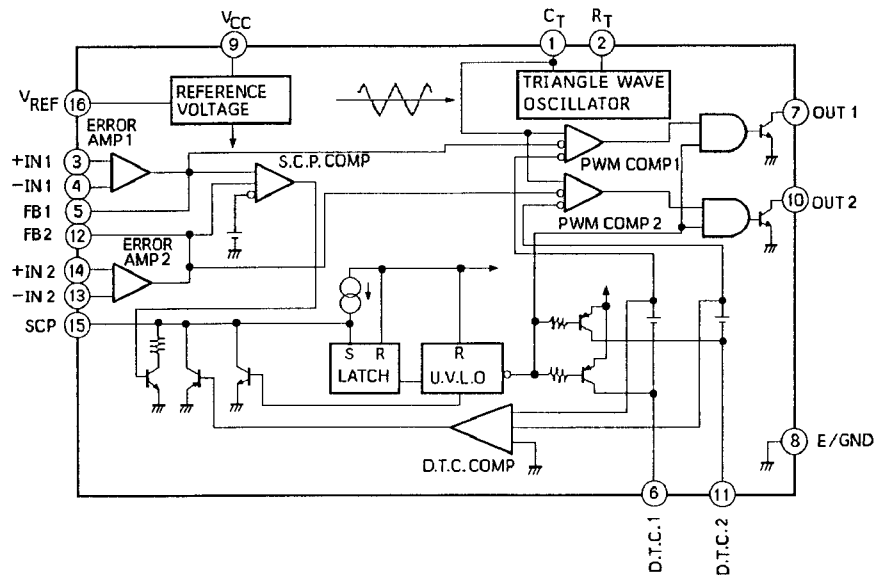
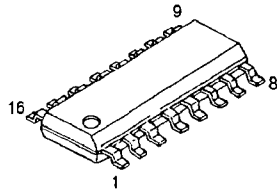
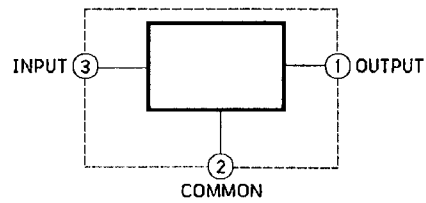
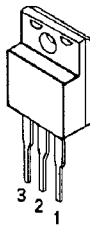
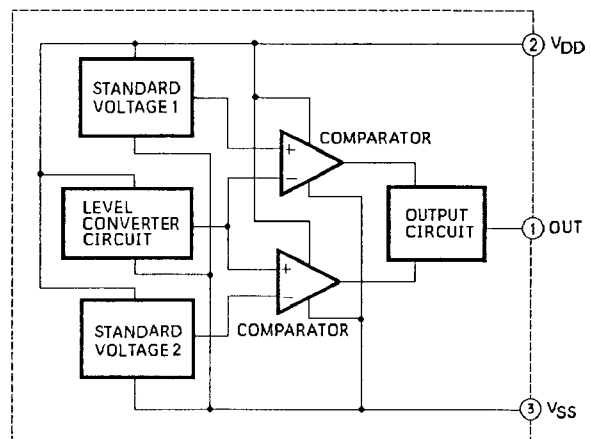
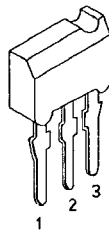


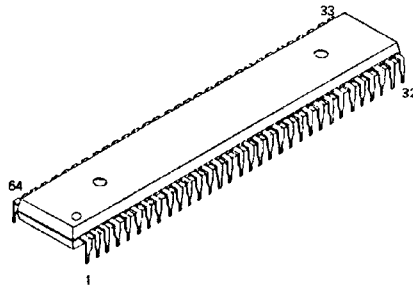
TC74HCU04AP : IC704



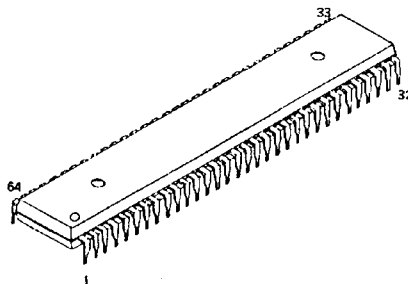
TORX193K : IC705~707



MB3775 : IC801**NJM7805FA : IC802, 911, 912****MN1280-S : IC803**

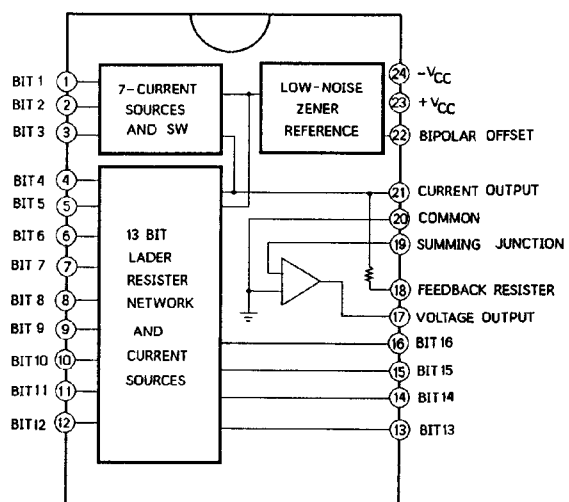
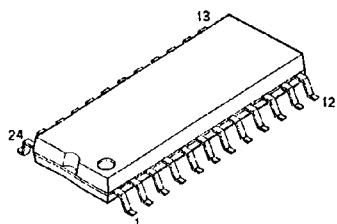
LC83010N : IC901, 902

PIN NO.	CODE ADDRESS	I/O	PIN NO.	CODE ADDRESS	I/O	PIN NO.	CODE ADDRESS	I/O
1	NC	—	23	D4	I/O	45	VCC	—
2	NC	—	24	D5	I/O	46	RES	I
3	NC	—	25	D6	I/O	47	NC	—
4	NC	—	26	D7	I/O	48	GND	—
5	NC	—	27	DM	I/O	49	T2	I
6	NC	—	28	L/R	O	50	T1	I
7	NC	—	29	NC	—	51	T3	I
8	NC	—	30	NC	—	52	T4	I
9	NC	—	31	NC	—	53	NC	—
10	NC	—	32	NC	—	54	NC	—
11	NC	—	33	M1	O	55	NC	—
12	CAS	O	34	M0	O	56	NC	—
13	NC	—	35	NC	—	57	NC	—
14	NC	—	36	NC	—	58	NC	—
15	VCC	—	37	BCK	I	59	NC	—
16	384FS	—	38	NC	—	60	SI	I
17	NC	—	39	DI	I	61	SICK	I
18	GND	—	40	NC	—	62	SIRQ	I
19	384FS	O	41	NC	—	63	SIACK	O
20	DL	I/O	42	LRCK	I	64	SRDY	I
21	D2	I/O	43	SELC	I			
22	D3	I/O	44	NC	—			

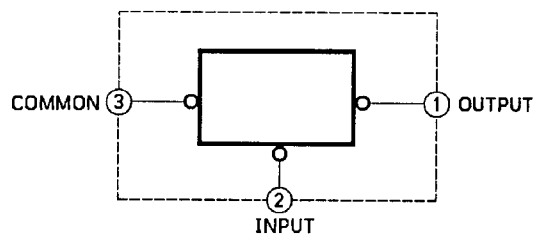
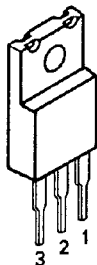
35092W01 : IC903, 904

PIN NO.	CODE ADDRESS	I/O	PIN NO.	CODE ADDRESS	I/O	PIN NO.	CODE ADDRESS	I/O
1	NC	—	23	B/16	I	45	D013	O
2	MSB	O	24	16/18	I	46	D014	O
3	M1	I	25	NC	—	47	D015	O
4	M0	I	26	NC	—	48	L	O
5	L/R	I	27	NC	—	49	D1LS	O
6	DM	I	28	NC	—	50	D102	O
7	D7	I	29	NC	—	51	D103	O
8	D6	I	30	MUTE	O	52	D104	O
9	D5	I	31	P/S	I	53	D105	O
10	D4	I	32	GND	—	54	D106	O
11	D3	I	33	D0LS	O	55	D107	O
12	D2	I	34	D002	O	56	D108	O
13	DL	I	35	D003	O	57	D109	O
14	384FS	I	36	D004	O	58	D110	O
15	GND	—	37	D005	O	59	D111	O
16	NC	—	38	D006	O	60	D112	O
17	NC	—	39	D007	O	61	D113	O
18	VCC	—	40	D008	O	62	D114	O
19	NC	—	41	D009	O	63	D115	O
20	NC	—	42	D010	O	64	VCC	—
21	CAS	I	43	D011	O			
22	NC	—	44	D012	O			

PCM55HP : IC905~908



NJM7905FA : IC913, 914



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